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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,261	12/31/2003	Steve S.K. Chou	TRMB1405	1726

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WAGNER, MURABITO & HAO LLP
Third Floor
Two North Market Street
San Jose, CA 95113

EXAMINER

ORR, HENRY W

ART UNIT	PAPER NUMBER
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2176

MAIL DATE	DELIVERY MODE
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07/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/750,261

Applicant(s)

CHOU, STEVE S.K.

Examiner

Henry Orr

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/31/2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to applicant's amendment dated 5/22/2007.
2. Claims 1-20 are pending in the case.
3. Claims 1, 8 and 15 are independent claims.

Applicant's Response

4. In Applicant's response dated 5/22/2007, applicant has amended the following:

- a) Specification

Based on Applicant's amendments and remarks, the following objections and rejections previously set forth in Office Action dated 2/16/2007 are withdrawn:

- a) Objection to Specification

Drawings

5. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. **Claims 1-5, 7, 8, 11-15 and 17-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Thomas et al. (hereinafter "Thomas"), U.S. Patent No. 7,103,774 B2.**

Claim 1:

Thomas teaches *"portable handheld device that provide graphical interfaces"* (see col. 27 lines 35-45). **(claim 1; i.e., A system for entry and display of blueprint data comprising a handheld device).**

Thomas teaches *"the user may toggle between a data entry screen 334 and a level draw screen 436"* (see col. 21 lines 30-34). **(claim 1; i.e., graphical user interface for providing line segment data entry fields and for displaying input line segments).** Examiner interprets the graphical user interface to be capable of providing line segment data entry fields for the line segment objects and displaying inputted line segments (see col. 24 lines 10-18).

Thomas teaches "*data recording device 330 includes a processor, memory*" (see col. 15 lines 22-25). **(claim 1; i.e., a processor and memory adapted for accepting, storing, and editing line segment data associated with said input line segments.)**

Claim 2:

Thomas teaches "*Fig. 9 illustrates the hierarchical nature in which job-site elements that are mapped by the operator are subsequently stored in a working database*" (see col. 16 lines 2-5). **(claim 2; i.e., wherein said input line segments are stored as a hierarchical sequence)** Examiner interprets the job-site elements to include the line object element, which is equivalent to the line segment. The hierarchical nature of the elements, which are stored in a working database is interpreted as being "stored as a hierarchical sequence" as recited in claim 2.

Thomas teaches "*Referring to the area illustrated in FIG. 5, this first segment pair may include for example wall 1 (step 186) and wall 2 (step 194). In order to calculate the error on this segment pair, the system effectively isolates the pair (step 918), and determines the error on the segment*" (see col. 26 lines 55-65). **(claim 2; i.e., wherein editing, insertion, or deletion of a selected line segment translates line segments that succeed the selected line segment of said hierarchical sequence without translating line segments that precede the selected line segment in said hierarchical sequence.)** Examiner interprets wall 1 and wall 2 as line segments that are edited or translated in isolation without translating line segments that precede the selected wall 1 and wall 2 line segments.

Claim 3:

Thomas teaches "*The position of each structural element is defined in absolute terms, having a set of positional coordinates, lengths, directions*" (see col. 26 lines 50-52). **(claim 3; i.e., wherein said line segment data entry fields comprise a start point field, a direction field, and a length field.)**

Examiner interprets the data entry screen to have corresponding fields for the positional coordinates, lengths and directions because the line object is to create a structural element that can be defined in absolute terms. Therefore, the examiner interprets the fields to be in absolute terms for each structural element such as a line object that is used to represent a window. Examiner also interprets the positional coordinates that are defined to be capable of representing the starting point of a structural element. Thus, the point coordinate field is interpreted to be a start point field as well. See table 1 as an example of the type data that can be entered into the fields of the data entry screen by the operator (see col. 12-13).

Claim 4:

Thomas teaches "*Operator-wearable devices can also be used, including those with touch-screen display*" (see col. 7 lines 41-42). **(claim 4; i.e., said display is a touch-screen)**

Claim 5:

Thomas teaches *"interpret the original recorded data and convert it into a set of drawing components, i.e., points, lines, and arcs with their relative Cartesian coordinates"* (see col. 8 lines 18-21). **(claim 5; i.e., wherein said a graphical user interface further provides arc data fields.)** Examiner interprets the Thomas invention to have arc data fields for creating drawing components such as arcs.

Claim 7:

Thomas teaches *"A keyboard 336 may be used for data entry"* (see col. 15 lines 27-28). **(claim 7; i.e., further comprising a keypad)** Examiner interprets the keyboard to be equivalent to a keypad because a keypad is often a small handheld keyboard.

Claim 8:

Claim 8 is a method claim and is substantially encompassed in system claim 3; therefore the method claim is rejected under the same rationale as system claim 3 above.

Claim 11:

Thomas teaches *"The linkage may even be a purely vector linkage, simply linking the spatial position of one element to that of another element"* (see col. 4 lines 21-28). **(claim 11; i.e., entering a start point for a second line segment, wherein said start point of said second line segment is an end point of said first line segment; and**

entering and displaying said second line segment on said display.) Examiner interprets vector linkage to involve entering start points for line objects as illustrated in Thomas's Table 1. Figure 3 displays several line objects ("line segment") linked together at a line segment end point as recited in claim 11(see Figure 3).

Claim 12:

Thomas's Table 1 illustrates the ability for the user to enter the start point for a line segment at any end point of a previously created line segment. **(claim 12; i.e., entering a start point for a third line segment, wherein said start point of said third line segment is an end point of said first line segment;)**

Thomas teaches *"A primary goal is to close the segment pair (step 926, i.e. to ensure that the individual elements in the segment pair correctly abut one another"* (see col. 26 lines 64-67). **(claim 12; i.e., translating said second line segment so that the start point of said second line segment coincides with an end point of said third line segment.)** Examiner interprets the individual element as a line object that can be translated to abut ("coincides") the other line object within the pair. Examiner also interprets the line segments can be designated as first, second, or third because the line segment hierarchical rank is based on the sequence of order in which the line segments were inserted to create the entire drawing.

Claim 13:

Thomas's Table 1 illustrates the ability for the user to enter the start point for a line segment at any end point of a previously created line segment. **(claim 13; i.e., entering a start point for a third line segment, wherein said start point of said third line segment is an end point of said second line segment;)**

Thomas's Figure 11 illustrates a graphical interface for entering and displaying line objects ("line segments") regardless of the hierarchal ranking of first, second or third line object. **(claim 13; i.e., entering and displaying said third line segment on said display.)**

Claim 14:

Thomas teaches *"Fig. 9 illustrates the hierarchical nature in which job-site elements that are mapped by the operator are subsequently stored in a working database"* (see col. 16 lines 2-5). **(claim 14; i.e., storing said first, second, and third line segments as a hierarchical sequence)** Examiner interprets the job-site elements to include the line object element, which is equivalent to the line segment. The hierarchical nature of the elements, which are stored in a working database is interpreted as being "storing as a hierarchical sequence" as recited in claim 14.

Thomas teaches *"Referring to the area illustrated in FIG. 5, this first segment pair may include for example wall 1 (step 186) and wall 2 (step 194). In order to calculate the error on this segment pair, the system effectively isolates the pair (step 918), and determines the error on the segment"* (see col. 26 lines 55-65). **(claim 14; i.e., wherein**

editing or deletion of said second line segment automatically translates said third line segment without translating said first line segment.)

Examiner interprets wall 1 and wall 2 to be second and third line segment, respectively. The pair of line segment was isolated from the first or previous hierarchically rank line segments. Therefore, wall 1 ("second line segment") and the wall 2 ("third line segment") are translated to minimize the error of the segment pair. When the error is minimized using just wall 1 and wall 2, no further translation is needed because the error has been translated to an acceptable minimize level. Thus, the first line object ("first line segment") that connects to the wall 1 ("second line segment") is not translated.

Claims 15, 17, 18, 19 and 20:

Claims 15, 17, 18, 19 and 20 include a program embodied on a computer readable medium to implement the steps that are substantially encompassed in method claims 3, 11, 12, 13 and 14 respectively; therefore the claims are rejected under the same rationale as method claims 3, 11, 12, 13 and 14 above.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. Claims 6, 10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Thomas as cited above, in view of Olmsted, U.S. Patent No. 7,013,234 B1.

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Claim 6:

Thomas fails to expressly teach arc fields such as start point, end point or radius for creating an arc.

However, Olmsted Figure 21 illustrates a user interface wherein the user can create an arc with a start point, end point, and radius field. **(claim 6; i.e., wherein said arc data fields comprise a start point field, an end point field, and a radius field.)** Examiner interprets the "arcPoints" field to allow the user to input the desired number of arc points. Depending on the number of arc points, the first point is interpreted to be the "start point" and the last point is interpreted to be the "end point".

It would have been obvious to one of ordinary skill in the art at the time the invention to modify Thomas object specific system interface to include arc fields to enter arc points which includes the start and end points and a radius field as taught by Olmsted to provide the benefit of allowing the user to view and modify the attributes associated with a particular arc object type (see Thomas; col. 28 lines 45-59) (see Olmstead; Figure 21).

Claim 10:

Claim 10 is a method claim and is substantially encompassed in system claim 6; therefore the method claim is rejected under the same rationale as system claim 6 above.

Claim 16:

Claim 16 includes a program embodied on a computer readable medium to implement the steps that are substantially encompassed in system claim 6; therefore the claim is rejected under the same rationale as system claim 6 above.

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Thomas as cited above, in view of Minakata, U.S. Patent No. 5,568,565 B1.

Claim 9:

Thomas fails to expressly teach a repeat factor.

However, Minakata teaches "*Repetition factor Rf is a parameter which shows whether the user intends to repeatedly write line segments*" (see col. 5 lines 26-27).

(claim 9; i.e., further comprising entering a repeat factor for said line segment.)

Examiner interprets the repetition factor as equivalent to the repeat factor because the both the repetition factor and repeat factor indicate how many times the line segments should be repeated.

It would have been obvious to one of ordinary skill in the art at the time the invention to modify Thomas object specific system interface to include a repetition factor as taught by Minakata to provide benefit of allowing the user to indicate how many times to repeatedly write segments for a defined line object (see Thomas; col. 28 lines 45-59) (see Minakata; col. 26-31).

Response to Arguments

11. Applicant's arguments filed 5/22/2007 have been fully considered but they are not persuasive.

Rejections under 35 U.S.C. 102(e):

In respect to claims 1-5, 7, 8, 11-15 and 17-20, Applicant argues that Thomas does not anticipate the entry and display of **blueprint data** (see Applicant Response p. 9 lines 12-14).

Examiner disagrees.

According to the specification of the instant application "blueprint data" is a sequence of line segments and/or arcs (see spec p. 3 lines 7-16, p. 8 lines 13-20). Thomas's hand-held device allows entry and display of a sequence of line segments and/or arcs, which represents "blueprint data" as disclosed in applicant's specification.

In response to applicant's argument that "*blueprints are construction plans utilized to guide construction of a project*" (see Applicant Response p. 9 lines 3rd full paragraph), a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Rejections under 35 U.S.C. 103(a):

In respect to claims 6, 10 and 16, Applicant argues that Thomas and Olmstead is not in the same field of endeavor of entering data measurements into a hand-held device, and that the present invention is not rendered obvious over Thomas in view of Olmstead. Therefore, the rejection of claims 6, 10 and 16 under 35 U.S.C. 103(a) is improper (see Applicant response p. 11 1st full paragraph, p. 12 2nd full paragraph).

Examiner disagrees.

Upon further analysis, both Thomas and Olmstead are in the same analogous field of using graphical user interfaces to record data measurements to create a design layout of a building site (see Thomas; col. 4 lines 5-15) (see Olmstead; col. 1 lines 15-17). Both inventions of Thomas and Olmstead uses a hand-held device to assist the graphical user interfaces in displaying the design layout data.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify Thomas's graphical user interface to include arc fields to enter arc points which includes the start and end points and a radius field as taught by Olmsted's graphical user interface to provide the benefit of allowing the user to modify the attributes associated with a particular arc object type for display on a hand-held device (see Thomas; col. 28 lines 45-59) (see Olmstead; col. 5 lines 39-45, Figure 21).

In respect to claim 9, applicant argues that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the repeat factor is a user selectable input or user enterable field that is directed toward a repeat factor for the line segment (see Applicant Response p. 13 4th full

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paragraph, p. 14 1st full paragraph) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

12. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Orr whose telephone number is (571) 270 1308. The examiner can normally be reached on Monday thru Friday 8 to 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Hutton can be reached on (571) 272-4137. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

7/21/2007
HO

/Doug Hutton/
Primary Examiner
Art Unit 2176